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Agriculture

THE FIGHT AGAINST PLANT DISEASES IN 1933

A radio talk delivered by R. J. Haskell, Federal Extension Service, in the Department of Agriculture period of the National Farm and Home Hour, and broadcast by a network of 49 associate NBC radio stations, Wednesday, February 8, 1933.

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First let me express to you listeners of the National Farm and Home Hour the best wishes of the investigators of plant diseases and of the agricultural extension workers who bring to you the results of their experiments and experiences.

In the past we have spent much money for chemicals, and much labor in applying the chemicals to our crops in order to protect them against plant diseases. How much money and labor it costs, you hardly realize until you see gigantic power dusting machines in the potato fields of Maine let loose clouds of dust to protect the plants from late blight; or huge power spraying outfits in the fruit orchards of the Northwest send streams of spray materials to the tops of the highest trees; or seed potatoes being dipped in big vats of hot formaldehyde beside the railroad tracks in Louisiana. Then you begin to realize that fighting plant diseases is a hard and costly job.

But farmers and gardeners are trying to cut the costs this year wherever possible because prices of farm products are so low that growers can not stand heavy charges for disease control or anything else. In the production of many crops, however, no disease control means no crops, or short crops.

So, then one of the farm problems of 1933 is to lower the cost of controlling plant diseases. Some of you may decide to give up some of the defenses you have used in other years. But, let me urge each of you who are considering this step to go into the facts carefully before you do decide to give them up. Let me illustrate. For several years successful farmers in Iowa have been treating seedcorn with a chemical dust disinfectant. Since 1927 the average increase in yield per acre due to this treatment has been four bushels. But as corn prices have fallen the amount of seed treatment has decreased, because men have been hard put to find money to buy the seed treatment materials. But some men have kept on treating because they figure that even with corn at 10 cents a bushel, a man who can get an average gain of four bushels to the acre with treatment that costs only four cents, makes a profit. And they are right too. But questions like these are for each of you to decide individually on the basis of the best figures you can get as to results and costs.

Now I want to give the remainder of my visit with you to talking over ways of cheapening disease control without making it less effective. Of course, the best way, and the cheapest, and generally the most efficient way, of fighting plant diseases is to use seed or plants of varieties that resist disease. That is, if such varieties are available. And they are available to growers of some crops. For instance, the new yellows resistant cabbage varieties that Beattie has been telling you about. And the rust resistant wheats, and the sweet corn resistant to bacterial blight that Eisenhower mentioned in his farm science news reports.

(over)

Then there is the matter of good seed. Many disease producing germs are carried on or in seeds and one very important, and at the same time, inexpensive, step is to use disease-free seed if you can possibly get it.

But unfortunately you can't control all plant diseases by planting resistant varieties or disease-free seed. Chemicals for sprays and seed treatments are needed to control many of them. But even the cost of these chemicals can be cut and here are a few examples:

For instance, orchardists and vegetable growers are cutting down the number and increasing the effectiveness of sprays by putting the spray on at just the right time. They get spray notices from their State extension departments through the county agents. I have seen many examples of savings in costs and increases in income resulting from the use of these spray services. For instance, last spring certain New York apple growers who put on the delayed dormant spray too early or too late had a reduction in their crops because of serious scab injury to the fruit. But the growers who followed the spray warnings issued from the New York State Extension Service got the delayed dormant spray on at exactly the right time and produced crops of good salable fruit—at the same expense as the other men.

Another way of saving on disease control costs is to use home mixed sprays and dusts, and to buy the materials cooperatively. In one county, fruit growers last year pooled their orders for materials and bought 80 thousand pounds of lime, nearly 400 twenty-four pound cans of calcium arsenate and over 120 barrels of copper sulphate at wholesale prices and at smaller freight costs.

Farmers also are cutting down the cost of spraying by arranging operations and taking care of equipment so that both laborers and machines work at maximum efficiency.

Some men are cutting costs by using disease control methods that do not involve any expense for materials, although they do take more work. Examples are the hot water treatments of wheat and barley for the prevention of smut and the hot water treatment of cabbage, and cauliflower seed to control certain seed-borne diseases.

Now, looking forward to 1934, let me suggest two methods that will cut down your costs of disease control next year. One is the growing of your own seed at home, if you live in a locality where the home-grown seed is satisfactory. You don't have to lay out any money at all. Simply set aside a small, isolated seed plot and give the growing seed crop special attention for disease control, elimination of weeds, and eradication of varietal mixtures and of types.

The second method of cutting down the cost of disease control for 1934 is to use care in selecting the seed in the field next fall. For example, field selection of corn seed.

Now let's list the methods used by successful growers to cut disease control costs this year. Here they are in the order I have given them to you:

They use the spray service that their State extension workers put out. Where possible, they use home mixed spray materials and buy them cooperatively. They schedule operations and take care of machinery so as to get maximum efficiency out of labor and equipment. Wherever possible, they use the methods that involve no cost for materials. And looking forward to next year, they set aside seed plots and produce their own disease-free seed, as well as use more care in field selection of their seed. Finally, they consult their county agents for new and inexpensive methods of plant disease control.